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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/726,718

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Shi-Qiu Zhang

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EXAMINER

PRATT, HELEN F

ART UNIT

PAPER NUMBER

1761

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/726,718	Applicant(s) ZHANG ET AL.	
	Examiner Helen F. Pratt	Art Unit 1761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei et al. (7,060,301) in view of Kneuvan (6,620,455) and Hu Y et al. (XP-002315839) and further in view of Prepared Foods.

Wei et al. disclose an antimicrobial composition, which can be used in a beverage (abstract). The process as in claim 17 contains the composition (claim 13), which is heated for at least 5 seconds at a temperature of from 0 to 100 C. (col. 37, lines 10-17, col. 38, lines 1-20). The claims differ from the reference in whether the correct pKa is disclosed by the reference. Nothing is seen that the antimicrobial composition has a pKa of more than 3 or greater than 6. Kneuvan discloses a lemonade beverage composition as in claims 1, 2, 4, 5, 6, 11, 15, 16, containing water and alkali metal bisulfate (sodium bisulfate). The sodium bisulfate is used as an acidulant in food (abstract and col. 8, lines 1-21). The sodium bisulfate has a pKa of 1.99. No citric acid is seen in the composition (col. 8, lines 1-12). Hu disclose that it is known to make a composition containing minerals and pure water and juice with hydrochloric acid as in claims 1, 6, 10, 11, 16 (abstract) that the claimed pKa's are known in beverages as above, (claim 19) and that the use of sodium bisulfate is known

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(claim 15). Heating any beverage composition to pasteurization temperatures is extremely well known. No citric acid is disclosed in Kneuvan and Hu as in claim 20. Therefore, it would have been obvious to heat a beverage as disclosed by Wei in the compositions and processes of Kneuvan and Hu.

The claims further differ in the use of tea solids in a particular amount. Prepared foods disclose as in claims 1, 2, 4, 6, that it is known to use sodium acid sulfate (sas) in beverages containing tea. The antimicrobial agent is monoprotic and is sodium bisulfate (sas), which has the claimed pka of under 2.6 as above. Nothing is seen that teas of Prepared Foods are not from solids. In a beverage, the tea solids would no longer be in the solid form. It is extremely well known that tea flavored beverages are prepared from tea leaves or as in instant teas made from tea solids. Prepared foods disclose as in claims 1, 2, 4, 6, that it is known to use sodium acid sulfate (sas) in beverages containing tea. The antimicrobial agent is monoprotic and is sodium bisulfate (sas), which has the claimed pka of under 2.6 as above. The discovery of an optimum value of a result effective variable is ordinarily within the skill of the art. In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). In developing a beverage product, properties such as preservation and flavor are important. It appears that the precise ingredients as well as their proportions affect the preservation and flavor of the product, and thus are result effective variables which one of ordinary skill in the art would routinely optimize. Therefore, it would have been obvious to make a flavored beverage from tea using particular amounts of tea solids, and to use the claimed anitmicrobial as shown by Prepared Foods.

Nothing new is seen in using known types of packaging as in claim 14, which are commonly used for beverages. Therefore, it would have been obvious to use known packaging materials in the process and composition of the combined references.

As the references to Kneuvan and Hu et al. disclose beverages without citric acid as in claim 20, it would have been obvious to heat a beverage as disclosed by Wei et al. without citric acid since heating is a common way of killing germs.

Prepared Foods disclose that it is known to use SAS with tea. Claims 7 and 8 further require particular amounts of tea solids, and claim 9 that a precursor can be used and claims 10 and 11, that the beverage is not sweetened or carbonated and claim 12 that a particular pH is used. However, it would have been within the skill of the ordinary worker to use particular amounts of tea solids and to sweeten or carbonate as required and to use a particular pH in order to provide an acceptable beverage. Therefore, it would have been obvious to vary the above parameters to make an acceptable tea beverage.

As Wei et al. disclose that it is known to heat-treat a beverage, which effectively kills germs, it would have been obvious to heat treat in the process of claim 18 to kill germs.

Claims 1, 2, 3, 4, 5, 6, 11, 15, 16, is rejected under 35 U.S.C. 103(a) as being unpatentable over Kneeven in view of Prepared Foods and further in view of Selsted et al. (5,324,716).

Kneeven discloses a lemonade beverage composition as in claims 1, 2, 4, 5, 6, 11, 15, 16, containing water and alkali metal bisulfate (sodium bisulfate). The sodium

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bisulfate is used as an acidulant in food (abstract and col. 8, lines 1-21). The sodium bisulfate has a pKa of 1.99. No citric acid is seen in the composition (col. 8, lines 1-12). The claims differ from the reference in the use of at least 0.01% tea solids. However, Prepared Foods disclose that it is known to use SAS with tea. The particular amount of tea solids is seen as being within the skill of the ordinary worker. It is extremely well known that tea can be made from tea solids to make a flavored beverage. That is the way tea beverages can be made. Therefore, it would have been obvious to make a tea beverage containing the claimed sodium acid sulfate.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the above references as applied to the above claims, and further in view of Selsted et al.

Selsted et al. disclose that it is known to use tryptophan-rich peptides exhibiting antimicrobial activity in foods (abstract and col. 12, lines 1-4). Therefore, it would have been obvious to use an amino acid containing microbial composition as shown by Selsted et al. in the beverage of Knueven for its known function as a microbial agent.

ARGUMENTS

Applicant's arguments filed 2-13-07 have been fully considered but they are not persuasive. Applicants argue that there is nothing in Prepared Foods to suggest that the claimed antimicrobial system can be used with 0.01% tea solids in a beverage. However, Prepared Foods does show that the antimicrobial system can be used with teas. Teas obvious have been made from tea solids of some kind. This is notoriously well known. Also, the reference is to a wide variety of beverages, and nothing has been shown as to why tea is different than other beverages. No criticality has been shown in

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the use of tea solids instead of other beverages. Applicants' specification is to beverages in general (page 6, 3rd paragraph). Also, see In re Boesch as above.

Applicants argue that the '301 reference to Wei et al. is not to a beverage. This is not seen as the abstract discloses that the antimicrobial composition can be used in a beverage ("More particularly invention relates to mono- or diester dicarboxylate antimicrobial compositions that can reduce the population of microbes.... or in food, beverages " or ..." (abstract). As above, no criticality is seen in the use of tea solids as the flavorant for the beverage.

Applicants argue that Prepared Foods does not state the amounts of tea solids. However, it does say that tea can be used with the antimicrobial. Tea is made from tea solids. No patentable distinction is seen in the use of a flavored tea beverage made from some form of tea and the claimed antimicrobial, and a beverage containing tea as a flavor, and the antimicrobial, particularly as applicants' claims are to a beverage, and the tea solids would not be solid in a beverage and therefore the tea solids would also act as a flavorant.

Applicants argue that there is no mention of tea solids in the '445 reference (Selsted et al.) However, the reference discloses that it is for use in a food, or water has been shown that it wouldn't work in tea, but is an antimicrobial. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen F. Pratt whose telephone number is 571-272-1404. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Milton Cano, can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hp 3-13-07


HELEN PRATT
PRIMARY EXAMINER